

1. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $3x + 4y = 15$ and passing through the point $(8, 10)$.

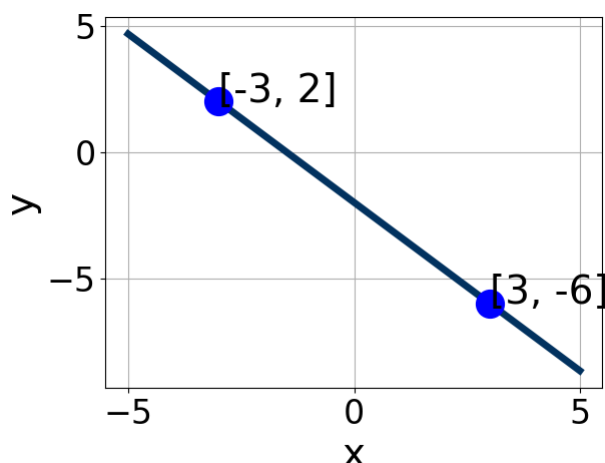
- A. $m \in [-1.82, -1.19]$ $b \in [19.7, 22.4]$
- B. $m \in [0.87, 1.78]$ $b \in [-1.9, -0.6]$
- C. $m \in [0.87, 1.78]$ $b \in [-0.3, 1.1]$
- D. $m \in [0.87, 1.78]$ $b \in [1.9, 3]$
- E. $m \in [-0.26, 0.92]$ $b \in [-1.9, -0.6]$

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2. Solve the equation below. Then, choose the interval that contains the solution.

$$-11(12x + 4) = -3(13x - 5)$$

- A. $x \in [-0.96, -0.63]$
- B. $x \in [-0.1, 0.58]$
- C. $x \in [-0.28, -0.02]$
- D. $x \in [-0.61, -0.2]$
- E. There are no real solutions.

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3. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



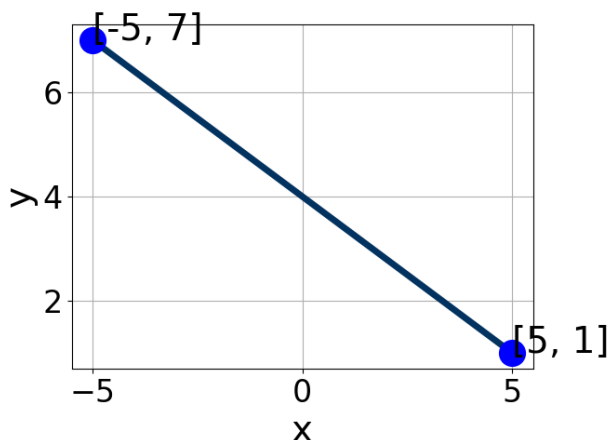
- A. $A \in [2, 6]$, $B \in [2.44, 4.14]$, and $C \in [-6.2, -4.4]$
- B. $A \in [-8, -2]$, $B \in [-4.02, -2.76]$, and $C \in [2.9, 8]$
- C. $A \in [-2.67, 3.33]$, $B \in [0.8, 2.59]$, and $C \in [-4.7, -0.7]$
- D. $A \in [2, 6]$, $B \in [-4.02, -2.76]$, and $C \in [2.9, 8]$
- E. $A \in [-2.67, 3.33]$, $B \in [-1.55, -0.2]$, and $C \in [0.4, 5]$

4. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $9x + 4y = 10$ and passing through the point $(6, -8)$.

- A. $m \in [-4.25, -1.25]$ $b \in [-5.5, -3.5]$
- B. $m \in [-4.25, -1.25]$ $b \in [0.5, 9.5]$
- C. $m \in [0.25, 4.25]$ $b \in [-21.5, -18.5]$
- D. $m \in [-4.25, -1.25]$ $b \in [-16, -8]$
- E. $m \in [-1.44, 0.56]$ $b \in [0.5, 9.5]$

5. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [-6, -2]$, $B \in [-6.5, -4.1]$, and $C \in [-21, -19]$
 B. $A \in [1, 4]$, $B \in [-6.5, -4.1]$, and $C \in [-21, -19]$
 C. $A \in [-2.4, 2.6]$, $B \in [-4.5, -0.6]$, and $C \in [-6, -2]$
 D. $A \in [-2.4, 2.6]$, $B \in [0.5, 2.9]$, and $C \in [1, 9]$
 E. $A \in [1, 4]$, $B \in [3.5, 5.3]$, and $C \in [19, 21]$

6. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{3x - 4}{4} - \frac{5x + 6}{2} = \frac{-7x - 8}{3}$$

- A. $x \in [-0.2, 1.5]$
 B. $x \in [-8.5, -6.8]$
 C. $x \in [0.3, 3]$
 D. $x \in [2.9, 5.1]$
 E. There are no real solutions.

7. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(-4, -8) \text{ and } (7, -5)$$

- A. $m \in [-1.69, -0.19]$ $b \in [-3.48, -3.05]$
 - B. $m \in [0.25, 0.35]$ $b \in [-4.26, -3.91]$
 - C. $m \in [0.25, 0.35]$ $b \in [-13.01, -11.52]$
 - D. $m \in [0.25, 0.35]$ $b \in [5.35, 7.65]$
 - E. $m \in [0.25, 0.35]$ $b \in [-8.14, -6.21]$
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8. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 5}{8} - \frac{7x - 8}{5} = \frac{-4x + 7}{3}$$

- A. $x \in [3.1, 3.26]$
 - B. $x \in [8.68, 9.71]$
 - C. $x \in [0.88, 1.5]$
 - D. $x \in [10.29, 11.53]$
 - E. There are no real solutions.
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9. Solve the equation below. Then, choose the interval that contains the solution.

$$-16(6x - 13) = -10(-4x - 3)$$

- A. $x \in [1.32, 2.57]$
 - B. $x \in [-1.84, -1.38]$
 - C. $x \in [3.37, 4.88]$
 - D. $x \in [1.2, 1.37]$
 - E. There are no real solutions.
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10. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals

that contain m and b .

$$(9, 2) \text{ and } (4, -4)$$

- A. $m \in [0.2, 4.2]$ $b \in [-9.72, -8.07]$
 - B. $m \in [0.2, 4.2]$ $b \in [-7.07, -6.82]$
 - C. $m \in [-6.2, 0.8]$ $b \in [0.18, 1.12]$
 - D. $m \in [0.2, 4.2]$ $b \in [8.48, 10.02]$
 - E. $m \in [0.2, 4.2]$ $b \in [-8.74, -7.05]$
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11. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $4x + 7y = 6$ and passing through the point $(-10, 7)$.

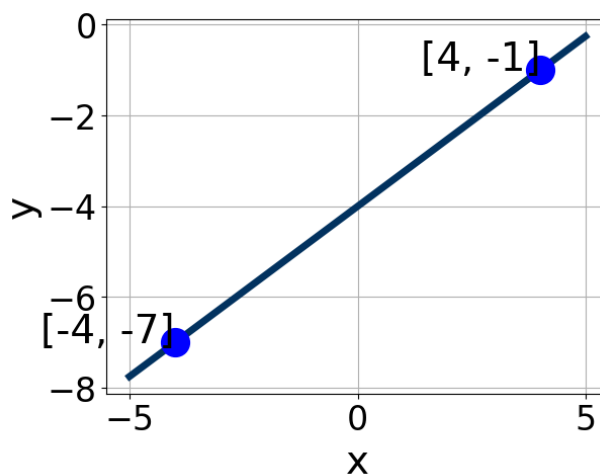
- A. $m \in [0.13, 0.63]$ $b \in [10.9, 13.8]$
 - B. $m \in [-1.26, -0.23]$ $b \in [15.6, 17.4]$
 - C. $m \in [-1.26, -0.23]$ $b \in [-1.4, -0.3]$
 - D. $m \in [-1.26, -0.23]$ $b \in [1, 2.5]$
 - E. $m \in [-1.86, -1.45]$ $b \in [1, 2.5]$
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12. Solve the equation below. Then, choose the interval that contains the solution.

$$-2(18x + 15) = -17(5x + 4)$$

- A. $x \in [-0.8, -0.75]$
 - B. $x \in [-2.07, -1.94]$
 - C. $x \in [-0.85, -0.8]$
 - D. $x \in [1.97, 2.04]$
 - E. There are no real solutions.
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13. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



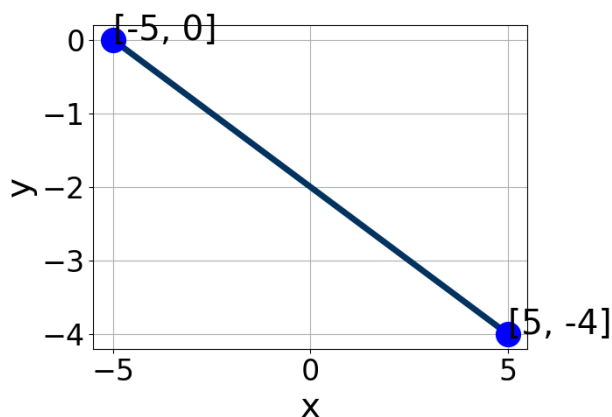
- A. $A \in [0, 11]$, $B \in [-4.9, -2.1]$, and $C \in [11, 17]$
 B. $A \in [-5, -2]$, $B \in [3, 5.3]$, and $C \in [-17, -13]$
 C. $A \in [0, 11]$, $B \in [3, 5.3]$, and $C \in [-17, -13]$
 D. $A \in [-1.75, 1.25]$, $B \in [-1.9, -0.3]$, and $C \in [4, 9]$
 E. $A \in [-1.75, 1.25]$, $B \in [-0.9, 3.9]$, and $C \in [-6, -3]$

14. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $8x - 7y = 15$ and passing through the point $(-8, 2)$.

- A. $m \in [-0.95, -0.63]$ $b \in [9.4, 12.2]$
 B. $m \in [-0.95, -0.63]$ $b \in [4.8, 7.4]$
 C. $m \in [-0.95, -0.63]$ $b \in [-5.7, -4.2]$
 D. $m \in [-1.29, -0.91]$ $b \in [-5.7, -4.2]$
 E. $m \in [0.67, 0.93]$ $b \in [8.9, 9.9]$

15. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [-0.74, 0.63]$, $B \in [-0.1, 3.7]$, and $C \in [-3, 0]$
 B. $A \in [-3.35, -0.07]$, $B \in [-8, -2.4]$, and $C \in [10, 15]$
 C. $A \in [0.71, 2.16]$, $B \in [3.6, 6.3]$, and $C \in [-16, -9]$
 D. $A \in [0.71, 2.16]$, $B \in [-8, -2.4]$, and $C \in [10, 15]$
 E. $A \in [-0.74, 0.63]$, $B \in [-2.5, 0.2]$, and $C \in [1, 9]$

16. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x + 7}{8} - \frac{-5x - 7}{4} = \frac{8x - 5}{2}$$

- A. $x \in [-8.12, -2.12]$
 B. $x \in [7.44, 11.44]$
 C. $x \in [-1.28, 1.72]$
 D. $x \in [1.28, 4.28]$
 E. There are no real solutions.

17. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$(5, -11)$ and $(-5, 4)$

- A. $m \in [0.8, 4.6]$ $b \in [10.5, 16.5]$

- B. $m \in [-2.8, -1.2]$ $b \in [-22, -14]$
C. $m \in [-2.8, -1.2]$ $b \in [5, 11]$
D. $m \in [-2.8, -1.2]$ $b \in [-3.5, -0.5]$
E. $m \in [-2.8, -1.2]$ $b \in [1.5, 8.5]$
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18. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{5x + 4}{2} - \frac{3x - 7}{8} = \frac{3x - 6}{4}$$

- A. $x \in [-3.7, -2.4]$
B. $x \in [3.3, 4.5]$
C. $x \in [-14.5, -11.3]$
D. $x \in [-2.2, -1.2]$
E. There are no real solutions.
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19. Solve the equation below. Then, choose the interval that contains the solution.

$$-8(6x + 5) = -13(-4x + 7)$$

- A. $x \in [32.18, 33.29]$
B. $x \in [-0.06, 0.79]$
C. $x \in [0.69, 2.49]$
D. $x \in [-1.35, -0.65]$
E. There are no real solutions.
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20. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(7, -11) \text{ and } (-7, -10)$$

- A. $m \in [-0.11, -0.06]$ $b \in [9.03, 10.59]$
 - B. $m \in [-0.11, -0.06]$ $b \in [-11.27, -10.49]$
 - C. $m \in [-0.11, -0.06]$ $b \in [-4.6, -1.23]$
 - D. $m \in [-0.11, -0.06]$ $b \in [-18.5, -16.95]$
 - E. $m \in [0.04, 0.16]$ $b \in [-9.63, -9.42]$
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21. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $8x + 7y = 15$ and passing through the point $(3, -8)$.

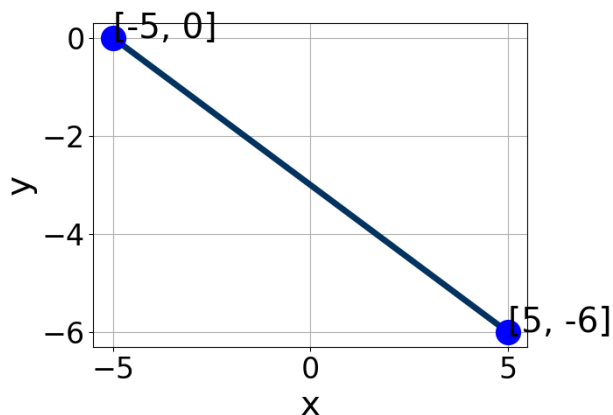
- A. $m \in [-0.92, -0.76]$ $b \in [-6.66, -5.11]$
 - B. $m \in [0.74, 1.04]$ $b \in [9.9, 11.01]$
 - C. $m \in [0.74, 1.04]$ $b \in [-10.91, -9.65]$
 - D. $m \in [1.02, 1.16]$ $b \in [-10.91, -9.65]$
 - E. $m \in [0.74, 1.04]$ $b \in [-11.81, -10.68]$
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22. Solve the equation below. Then, choose the interval that contains the solution.

$$-13(-8x - 16) = -10(2x + 19)$$

- A. $x \in [-3.24, -3.16]$
 - B. $x \in [0.01, 0.16]$
 - C. $x \in [-0.21, -0.14]$
 - D. $x \in [-0.26, -0.2]$
 - E. There are no real solutions.
-

23. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



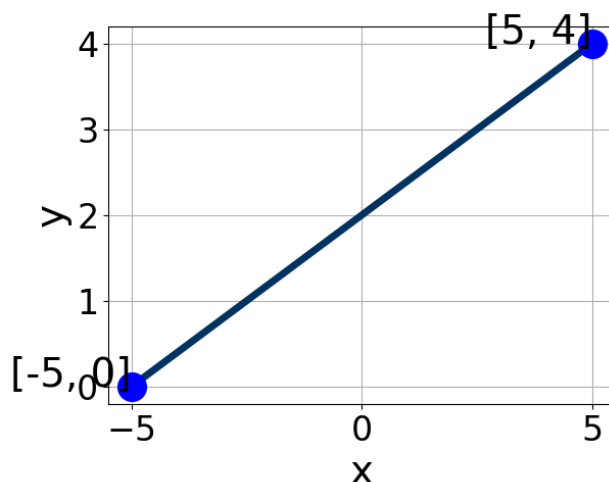
- A. $A \in [0, 2.7]$, $B \in [-4, 0.2]$, and $C \in [1, 8]$
- B. $A \in [-3.6, -2.9]$, $B \in [-5.5, -3.2]$, and $C \in [13, 18]$
- C. $A \in [0.8, 3.7]$, $B \in [-5.5, -3.2]$, and $C \in [13, 18]$
- D. $A \in [0, 2.7]$, $B \in [-0.2, 2]$, and $C \in [-12, 1]$
- E. $A \in [0.8, 3.7]$, $B \in [3.3, 6]$, and $C \in [-15, -13]$

24. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $5x - 9y = 12$ and passing through the point $(-7, -8)$.

- A. $m \in [-0.28, 0.66]$ $b \in [-6.11, -3.11]$
- B. $m \in [-0.99, 0.16]$ $b \in [-18.89, -10.89]$
- C. $m \in [-0.28, 0.66]$ $b \in [-3, 2]$
- D. $m \in [1.69, 2.14]$ $b \in [-6.11, -3.11]$
- E. $m \in [-0.28, 0.66]$ $b \in [2.11, 7.11]$

25. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [-0.63, 1.12]$, $B \in [-0.2, 2.36]$, and $C \in [1, 6]$
 B. $A \in [1.99, 4.03]$, $B \in [-5.17, -4.42]$, and $C \in [-12, -6]$
 C. $A \in [1.99, 4.03]$, $B \in [3.95, 6]$, and $C \in [5, 17]$
 D. $A \in [-2.3, -1.15]$, $B \in [3.95, 6]$, and $C \in [5, 17]$
 E. $A \in [-0.63, 1.12]$, $B \in [-1.75, 0.36]$, and $C \in [-4, 1]$

26. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 3}{3} - \frac{6x + 7}{5} = \frac{3x - 9}{2}$$

- A. $x \in [-0.13, 0.75]$
 B. $x \in [-1.8, -0.58]$
 C. $x \in [2.51, 3.64]$
 D. $x \in [0.71, 1.83]$
 E. There are no real solutions.

27. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$(-4, 9)$ and $(4, 3)$

- A. $m \in [-2.1, -0.3]$ $b \in [4.1, 7.43]$
 - B. $m \in [-2.1, -0.3]$ $b \in [-1.77, -0.34]$
 - C. $m \in [0.2, 2.7]$ $b \in [-0.68, 0.44]$
 - D. $m \in [-2.1, -0.3]$ $b \in [-7.52, -3.78]$
 - E. $m \in [-2.1, -0.3]$ $b \in [12.59, 13.66]$
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28. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-7x + 7}{2} - \frac{-4x + 9}{3} = \frac{-5x - 7}{7}$$

- A. $x \in [-2.2, 0.9]$
 - B. $x \in [1.4, 3.9]$
 - C. $x \in [0.7, 2.3]$
 - D. $x \in [5.1, 6]$
 - E. There are no real solutions.
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29. Solve the equation below. Then, choose the interval that contains the solution.

$$-6(-18x + 3) = -10(-15x + 19)$$

- A. $x \in [4.67, 5.4]$
 - B. $x \in [0.28, 1.26]$
 - C. $x \in [2.94, 4.46]$
 - D. $x \in [-6.68, -4.65]$
 - E. There are no real solutions.
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30. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals

that contain m and b .

$(9, -10)$ and $(3, 11)$

- A. $m \in [-4.5, -1.5]$ $b \in [-21.5, -20.5]$
 - B. $m \in [-4.5, -1.5]$ $b \in [-20, -18]$
 - C. $m \in [-4.5, -1.5]$ $b \in [16.5, 24.5]$
 - D. $m \in [-4.5, -1.5]$ $b \in [5, 16]$
 - E. $m \in [-2.5, 12.5]$ $b \in [0.5, 2.5]$
-